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New Views on Old Issues:

The CNCC Essay Award for Junior Scholars

Fabio Paglieri, Manos Tsakiris, Till Vierkant

As any other thriving field of scientific inquiry, consciousness studies face the need to captivate the interest of the most promising minds of the next generation of scholars. This is the reason why PhD programs, research networks, and dedicated labs are so essential to the development of the scientific study of consciousness. In addition, this is why this issue of *PSYCHE* is devoted to showcase the best results of an unusual but most welcome initiative in this area: an essay prize for scientific papers on consciousness by junior scholars. Thus the reader will find gathered here the six best papers out of forty-eight that were submitted to the *Consciousness in a Natural and Cultural Context* (CNCC) Essay Award for Junior Scholars. This was an international open contest for scientific papers on consciousness studies authored by young researchers who were PhD students while the call was open (October 2007-February 2008) or that had recently completed their PhD (no earlier than June 30, 2005). The papers are published here for the first time, along with critical commentaries by some of the most distinguished researchers in the field. The essay competition was sponsored by the European Science Foundation and managed within the EuroCORES programme *Consciousness in a Natural and Cultural Context* (CNCC), with the authors of this introduction in charge of the organization.

In presenting you this selection of remarkable essays, our purpose as editors is twofold: on the one hand, we intend to briefly outline the nature, scope, procedures, and outcomes of the CNCC Essay Award for Junior Scholars, hoping that it will help to foster a spawn of similar initiatives; on the other hand, we will provide the highlights of each individual paper, to help the reader navigate such a diverse collection of interdisciplinary contributions on different facets of consciousness.

Starting in October 2007, junior scholars were invited to submit a scholarly essay on a relevant topic in the field of consciousness studies, covering one or more of the following themes:

- Conceptual and methodological challenges
- Metaphysics and phenomenology of consciousness
- The sense of self
- Consciousness and emotion
- Norms and abnormalities in the study of consciousness
- The phylogenetic, ontogenetic and historical development of consciousness
- Consciousness and language
- Social dimensions of consciousness

Submitted essays had to be in English and describe original work, that is not yet published or submitted for publication elsewhere, although they may have been presented at conferences, workshops, symposia, and the like. Essays had to be demonstrably the product of the applicant's own research efforts: joint contributions were also in principle accepted (although none was received), but only provided that (1) the applicant was the main and first author of the paper, and (2) it was clear that the applicant's contribution was substantial with respect to previous works of his/her colleagues, and was not limited to glossing on such works.

The contest was designed to have six finalists and two winners *ex aequo*, and the six finalists were notified at the beginning of May 2008. Each winner received a monetary prize, and all finalist papers, along with the commentaries provided by distinguished scholars in the field, are published in this issue of *PSYCHE*. The finalist papers were publicly presented by the authors in Edinburgh on June 27, 2008, at a special CNCC-sponsored event dedicated to the contest. After the presentation, the two winners were announced. Each paper was critically discussed by an outstanding scholar in the field, and the author had the opportunity to reply to his/her comments.

As mentioned, the contest was sponsored by the European Science Foundation within the EuroCORES Program *Consciousness in a Natural and Cultural Context* (CNCC). CNCC members were invited to participate, but the contest was by no means limited to them or to European scholars: on the contrary, all young researchers from any country working in the field of consciousness studies were urged to submit their original work. The Scientific Committee responsible for the final decision was formed by both CNCC and non-CNCC scholars. A blind reviewing method was used, and authors were explicitly instructed to avoid including any information in the body of the paper or references that would identify their identity or their institutions. The peer-reviewing stage involved 64 anonymous reviewers, all senior scholars with research experience in several areas of consciousness studies, who produced 87 detailed reviews, assessing each paper in terms of originality, conceptual and empirical soundness, scholarly quality, and interdisciplinary content. Later on, the six finalist papers were independently re-assessed by the six jury members, who produced eighteen detailed reports on the overall strengths and weaknesses of the finalist papers and then selected the two winners. All these procedures were strictly double-blind: only the organizers were aware of the identity of the authors of each paper, and they never took direct part in the reviewing process or disclosed the authors' identity to the reviewers and the jurors.

The first two papers published in this issue are the final winners of the competition. Hong Yu Wong's paper, *On the necessity of bodily awareness for bodily action*, clarifies the way in which bodily awareness has a constitutive role in the sense of embodied agency, that is, the control of bodily action. Wong starts by presenting the *Necessity* principle, inspired by the work of Brian O'Shaughnessy according to which the feeling of a body part "from the inside" is necessary for acting with that body part. Wong critically analyzes this argument and presents three key challenges to the Necessity principle: neurological cases of deafferentation (i.e. elimination or interruption of proprioceptive feedback), brain-machine interface technologies, and the automatic nature of most of our everyday bodily actions. Even though these counterexamples can be used to draw the conclusion that bodily awareness plays a peripheral role in bodily agency, Wong concludes that they cannot deny the presence of "*some* intimate connection between bodily awareness and agency." Thus, we may have to accept that the link between bodily experience and agency is not one of necessity, and that bodily awareness may be at a "remove from a direct role" in online control of action. Thomas Goschke, in his commentary, further examines what the role of

body-awareness for control of action may be in the light of recent empirical findings from cognitive neurosciences.

The other winner is Dave Ward's paper, *The 'agent' in magenta: Action, color and consciousness*. The paper investigates the relationship between conscious experience and action. Focusing on color perception Ward argues that action plays a crucial role in our experience of color. The paper considers two types of enactive approaches (the sensorimotor theory and the action space theory) that claim to explain the phenomenon and notices that each faces one important objection. The action space account has problems with the objectivity of color while the sensorimotor account seems unable to do justice to the subjective features of color perception. Ward argues that a hybrid account can resist each of the criticisms and suggests that in addition it can be extended beyond color perception into a more general account of the relationship between action and perception. In their commentary, Erik Myin and Daniel Hutto discuss the extent to which a strong interpretation of an action-space account can be considered as a kind of cognitivism in the form of conservative enactivism.

In her paper *Searching for the source of executive attention*, Catherine Stinson outlines a philosophical critique of recent neuropsychological studies on executive attention, as a necessary preliminary step before addressing broader questions on how to study consciousness empirically. Stinson notices that, even though the connection between consciousness and attention is often acknowledged, and there is an abundant neuropsychological literature on attention, there has been little philosophical inquiry on how such a literature should bear on the ongoing search for the biological foundations of consciousness. This is problematic, because some of the assumptions made on the nature and function of attention may turn out to be misleading, and attempts at bypassing such difficulties via empirical research alone may prove ineffective. Indeed, Stinson argues that a common way of conceiving of attention as a causal agent runs into severe philosophical difficulties, and that the progressive accumulation of empirical evidence about the role of prefrontal cortex in attention will not be able to solve this quandary. In her diagnosis, this is because «the question at stake – whether a brain region can pay attention – is not an empirical question, but a metaphysical one.” Stinson's paper is here commented upon by Andy Clark, to the purpose of highlighting some open problems in current interdisciplinary work on attentional processes.

Adrian Smith's paper, *Acting on (bodily) experience*, focuses on the spatial content of bodily experience. To approach this question, Smith begins by examining the necessity and sufficiency of different corporeal frames of reference for characterizing the spatial content of bodily experience. Smith examines in detail an influential reference frame that is meant to provide clear-cut criteria for “sameness of bodily location” put forward by Bermúdez. In his analysis, Smith concludes that not any corporeal frame of reference constitutes an intracorporeal frame of reference. Instead, a more viable way for understanding the spatial content of bodily experience is to look at body-mereological representations, that is, explicit part-part relations, upon which part-whole relations may be dependent. This argument is further developed in the last section that specifically addresses the role of focal somatic attention that is egocentrically structured in virtue of being driven by action-oriented representations. Smith suggests that it is specifically the agent's “practical understanding” of the body's structure that provides her with an intracorporeal frame of reference. Although in her commentary Frederique de Vignemont acknowledges the clarity and strengths of Smith's analysis, she focuses on two critical problems. First, neuropsychological cases of “numbsense” and deafferentation suggest that there may be more than one type of bodily

spatial representations, and only one of them is linked to actions. Second, de Vignemont argues that Smith has explained the origin of the spatial content of our bodily experience (i.e. actions), but, perhaps, he has not yet explained the spatial content per se: “the spatial content may be determined by action, but what does action determine?”

Julian Kiverstein’s paper, *The minimal sense of self, temporality and the brain*, explores the possibility of a neuroscientific explanation of consciousness. More specifically, the paper is concerned with the claim that there is a neural representational system for any given experience, and that it is the minimal supervenience base of that experience. It argues that the minimal supervenience thesis is subject to two readings, which it calls the localist and the holist reading. Localist theories seek to identify the minimal supervenience base for specific experiences. They sideline questions about the nature of creature consciousness, treating the neural basis of creature consciousness as merely a causally necessary background condition for a particular conscious experience. Holists on the other hand prioritize creature consciousness and argue that we can only account for particular states of consciousness in the context of an account of creature consciousness. Kiverstein argues that any scientific explanation of consciousness must account for a minimal sense of self that is intrinsic to every conscious state. Holist theories are best able to accommodate this feature. The paper ends by connecting the minimal sense of self with the temporal structure of consciousness and by sketching two (related) information processing frameworks, which might contribute to a holist account of the neural basis of the minimal sense of self. Wheeler argues that while Kiverstein’s overall position is attractive and powerful, there are a number of problems with the details of the supporting argument. In particular, he questions whether the dependency relations between the minimal sense of self and the temporal structure of conscious experience are quite as Kiverstein suggests. In addition, Wheeler argues that there are cases of conscious experience that do not involve a minimal sense of self. If this were right, then it would count against Kiverstein’s claim that creature consciousness consists in the possession of a minimal sense of self. Finally, Wheeler argues that the localist-friendly distinction between the constitutive background conditions and the core realizer of a given experience is rather more robust than Kiverstein takes it to be.

Simone Duca’s paper, *Indicative conditionals and rationality*, suggests a new interpretation of some findings on Wason’s card selection task, based on Adams’ probabilistic interpretation of indicative conditionals. This raises interesting questions on the nature of human rationality and how we should gauge it in conditional reasoning tasks. Duca emphasizes that considering humans’ poor performance at the Wason’s task as indicative of poor conditional reasoning is likely to be a misleading diagnosis of the empirical findings, based on the assumption that the relevant conditional is to be understood as a material implication. In contrast, there are reasons to maintain that the proper interpretation is in terms of indicative conditionals, and this might affect how we assess the rationality of the tested subjects, depending on what logic of indicative conditionals we are willing to apply. Duca proposes to use Adams’ probabilistic view of indicative conditionals to interpret standard findings with the Wason’s selection task, and shows how this enables a better analysis of what exactly might go wrong in people’s conditional reasoning on that task. Namely, Duca argues that subjects have perfectly legitimate reasons to refrain from applying contraposition to the Wason’s task, since this rule is not valid in Adams’ logic of indicative conditionals; nonetheless, people also fail to apply modus tollens, which is a valid rule in this case, and doing so produces the specific patterns of response characteristic of the task. Duca’s arguments and conclusions are then taken up and cross-examined by Joëlle Proust in her commentary, to further this debate on conditional reasoning and human rationality. Proust begins her commentary by asking whether the poor performance in the Wason’s task

reflects a failure in rational reasoning, or whether participants understand the task in an unanticipated way. To approach this questions, Proust emphasized the need to understand how participants recognize which method is contextually appropriate, and how a theorist can discover the method used by the participants, and, finally, to validate what makes a specific decision rational given a specific context.

We would like to congratulate the six finalists for submitting the excellent papers that you will read in this special issue of *PSYCHE*. We would also like to thank all the authors who submitted their work for the CNCC Essay Award, the 64 reviewers, and the six jurors who assessed the submissions. We are grateful to the University of Edinburgh for hosting the final event. The CNCC Essay Award was sponsored by the EUROCORES Program *Consciousness in a Natural and Cultural Context* funded by the European Science Foundation (ESF), and fully supported by Dr Eva Hoogland, Program Coordinator for CNCC. We are grateful to Dr Hoogland for her continuing enthusiasm and support.

Finally, we would like to thank the editors of *PSYCHE*, Gabriel Kreiman and Robert Van Gulick, for accepting our proposal for this special issue well before we opened up the Call of Proposals, and the executive editor Stephanie Ortigue for her help and patience in preparing this issue. Our intention was to give the opportunity to young scholars to present their original work and allow them to engage in a constructive dialogue with established scholars from the field of consciousness studies. We believe that similar initiatives for disseminating the work of junior scholars should be undertaken by other organizations, institutions, and foundations. We hope that the quality of the papers and commentaries presented in this Special Issue will make a valuable contribution to the interdisciplinary study of consciousness.